G R S 59]

GPB—1 000—20 12 1

GENERAL AND REVENUE SECRETARIAT

1913-14
(Education)

File No. 342-13

Serial Nos. 1-3

Papers Filed.

Month May 1914

SUBJECT

"Half yearly report on the Mechanical Engineering School, Bangalore

PREVIOUS REFERENCES	LATER REFERENCES
	Ed 342-13 (4-5)

E Subrahmanyam
15 6 14

5492
5666

GRS 11] 191

GENERAL AND REVENUE SECRETARIAT

(Edn)

NOTES

Edn File No 3421.

FILE HEADING

Reports on the working of the Technical Institutions in the State

Industries

The D Gl of Education in Mysore

No 12178-9/634 Dated 14 3 14 Received 25 3 14

Diary No 5492	Enclo one report	Spare Copies nil	Serial No 1

BRIEF ABSTRACT OF LETTER

With reference to para 7 of G O No 8834 dtd 5-12-13 dated 1-5 1913 sanctioning the organization of the Chamarajendra Technical Institute at Mysore and the opening of Mechanical Engineering and Commercial Schools at Bangalore, Submits copy of the report of the Managing Committee of the Mechanical Engineering School Bangalore for the last half year

NOTES AND ORDERS

(1) From the D Gl of Edn Letter No 12511/652 dated 25 3 14 forwarded the half yearly report in respect of the Chamarajendra Technical Institutes

(2) Para 3 of the report on the

Subdn (11)

NOTES—First Sheet

7 4 14

BS

GPB—3 000—15 6 12

General and Revenue Secretariat | Edn File No 342 of 1913

Serial No

working of the Mechanical Engineering School Bangalore appears to call for some notice Considerable difficulty seems to be felt in keeping the number of students admitted permanently on the rolls, owing to the hard work and hours of attendance to which they are unaccustomed while in the ordinary Schools Better results are however expected as the students get settled down in due course

(3) Submitted for perusal The reports relating to the Chamarajpet Technical Institute ~~attached~~ are interesting & give all necessary information

(4) The number of students in each branch of the Mechanical Engineering School is not stated in the report

(5) These reports are submitted in pursuance of para 7 of the G O of 1st M 1913

Secretariat) SON 8/4

NOTE—Contn sheet

GPB—60 000—7 11 13

(3

5656

G R S 12]

General and Revenue Secretariat

2dee File No 342 of 1913

Serial No

(6) The report may be recalled

1st member Dewan) CSB 9/4/14 Vd

To Retd Regd

(7) 13/4/14

8922 15 4 '14

2 5-14

(8) RG

(9) Draft

10R 4/5

In draft Subd

15 4 14

BR

9/5

NOTE—Contn sheet

GPB—60 000—7 11 13

D 5792

Edn 81]

OFFICE OF INSPECTOR GENERAL OF EDUCATION IN MYSORE

Edn 342-13-
Serial

No 12178-9 / 634 Enc 1

Bangalore 14th March *1914*

From Rao Bahadur
M SHAMA RAO Esq MA
Inspector General of Education in Mysore

To C S Balasundaram Iyer Esq B A
Secretary to the Government of
His Highness the Maharaja of Mysore
Departments of Education & Agriculture
Bangalore

SIR

With reference to para 7 of Government Order No 8834-40/Edn 462-09-24 dated 1st May 1913 directing that half yearly reports of the work and progress of the Mechanical Engineering School Bangalore and Chamarajendra Technical Institute Mysore should be forwarded to Government I have the honour to submit herewith the report of the Managing Committee of the Mechanical Engineering School Bangalore for the last half year

The half-yearly report of the Chamarajendra Technical Institute will follow

I have the honour to be
Sir
Your most obedient servant

M Shama Rao

Inspector General

TNR

Commencement

1 As per Government Proceedings No 8834-40/Edn 462-09-24 dated 1st May 1913 the School was duly opened at 8 A M on 7th Monday July 1913

Locality

2 As per permission accorded, classes were held in Sir Seshadri Memorial Hall and Government High School In the former general subjects and drawing were taught and in the latter Science subjects which required apparatus for practical demonstration Practical instruction in Work-shop work was imparted in a portion of Water Supply & Stores Division buildings where work-benches &c were temporarily put up

Students

3 201 students applied and 75 were selected as fit for admission On the opening day, only 75 joined of whom 44 remained at the end of the week This being brought to the notice of the Committee a second selection of 40 was made of whom 39 joined Our students are unaccustomed to hard work such as is required in a school of this type Their number gradually fell off to 45 who are attending at present and two students had to be dismissed for extremely bad conduct There has been a general complaint with regard to the hours of attendance and they were not able to come to a definite conclusion though they were given the freedom to suggest suitable hours

How many Students in each Lower Secondary

4 With regard to their qualifications and classification according to communities please see the annexed table

Total strength

Syllabus

5 Though it was the intention of the Government to instruct students to S S L C standard the Committee thought fit to curtail the syllabus to a considerable extent in theoretical subjects and devote more time for practical

practical work

Staff

6 At present there are (1) a general assistant to teach Mathematics and Science (2) A technical assistant to teach drawing and (3) a work-shop Instructor (4) a carpenter Maistry (5) a motor mechanic and (6) Fitter Maistry to impart instruction in work-shop (7) a blacksmith Maistry for Smithy class Their work is satisfactory so far

Establishment

7 There is one clerk who has to do both correspondence and store work and two peons two watchmen and a sweeper Recently a watchman and a peon were temporarily employed

Nature & Extent of work done

8 (1) General subjects - Arithmetic Algebra Geometry and Chemistry have been gone through as per syllabus Mensuration is just commenced and a portion of Physics viz General properties of matter and heat have been taught

(2) Drawing - (a) Students have gone through a course of free hand drawing of figures bounded by straight lines and curved lines and a few simple ornamental figures devoting in all about 30 hours for it

(b) Block and Italic printing scales conventional sections of vario s materials rolled iron work; lever and machine handles have been done in instrumental drawing Rivets and rivetted work have been commenced

(c) Geometrical - A few simple geometrical propositions as per Vere Foster text-book are being done

Work-shop Practice

(a) In fitter section students have gone through chipping and filing grove cutting filing to a given size a cast iron T block filing a wrought iron cube

(b) In carpenter section students have been to do the following joints - Half-lap mortise and tenon bridle open mortise and tenon dove-tailing ordinary box dove-tailing halving cogging &c a few students have been able to make some three teak-wood stools

(c) A system of recording in a note book the work they do with sketches and the time taken to finish has been satisfactorily adopted

(d) Gradually the system of writing in Vernacular the description of the methods of doing various exercises the difficulties they met with and remedies adopted has been pursued by the students Their exercises are corrected as soon as they are ready One student has been able to produce a highly satisfactory description of work-shop methods in Kanarese and it may with few corrections here and there be printed as an elementary text-book

Examination

9 Two written examinations were held in Science and Mathematics one in September and another in December 1913 Two oral examinations ~~are~~ were held in Science and Mathematics in November 1913 The results of the examinations are not disappointing though better may be expected as we go along when students get a bit settled down to the combined system of mental and manual work together with hours of attendance different from ordinary schools and colleges and to which they were accustomed

Scholarships

10 At the time of opening the school it was difficult to award scholarships on any basis So the Committee thought fit to wait for three months during which time the progress of the students was carefully watched and enquiries were made as to the needs of the students', an examination was held and after due consideration 20 students were awarded scholarships, only one or two of them have not proved very successful

The Advisory and Governing Body

11 The Managing Committee appointed by the Government met five times in the office of the Superintending Engineer Southern Circle Bangalore The following forms the most important portion of the business transacted

1 Selection of students for admission
2 Drawing up of Syllabus
3 Selection of students for award of Scholarships
4 Working out certain equipment details

Building construction

12 A new building at a cost of Rs 15 984/- to meet the requirement of the school is under construction since 9th June 1913 and is expected to be complete by the end of January 1914 The triangular plot of ground between the Revenue Survey Office and the High School is the site chosen

Equipment

13 In fitter's section 24 students are suitably equipped with tools similarly 20 in Carpentr's Section Machinery to the value of Rs 3100/- has been bought for use in the School

Conclusion

14 The working of the staff and the establishment is very satisfactory Before next official year building is to be extended and equipment enhanced to meet the growing demand for which a separate proposal will

Edn 342-13
Genl 2

Edn 81]

OFFICE OF INSPECTOR GENERAL OF EDUCATION IN MYSORE

12511
No ----- Enc 1
652

Bangalore 25th March *1914*

From Rao Bahadur
M SHAMA RAO Esq MA
Inspector General of Education in Mysore

To
C S Balasundaram Iyer Esq B A
Secretary to the Government of
His Highness the Maharaja of Mysore
Departments of Education & Agriculture
Bangalore

SIR

In continuation of my letter No 12178-9/634 dated 14th/23rd March 1914 I have the honour to submit herewith a copy of the report of the Managing Committee of the Chamarajendra Technical Institute Mysore for the half year ending 31st December 1913

I have the honour to be
Sir
Your most obedient servant

C Krishna Rao

Deputy Inspector General
For Inspector General
(Absent from Station)

TTR

Half yearly Re ort of he ..rgir. Committee on the pro-
.ress and /or of he Cham.ra.endra Technical Insti'u'e ore
for the half year endin. December 1913

- - - - - - - - -

The form.tion of the Chamara.endra Technical Institute b
combinin. the existin. Engineerin. an Indu trial Schools at
Lysore was sanctioned b the Government in heir Proceedin.s o
88 -40/ dn 462 0 -24 dated 1st La 1913 as the Instiu e build-
in. was ot read for occ pation he n.ineerin. and Industrial
Schools continued to /or in their previous habitations for some
3 months after the da'e of order sanctionin. the formation of the
Institute The buildin. was .rtly read. for s'iftin. the schools
early in Au.ust The Engineering School st rted classes n the
ne/ uilding on the 5th A.ust and the Indu trial School on the
26th of the same month

In the mean hile however ar an.ements for .ettin. the
machinery tools etc required for the different Sections of
the Insti'ute were made immedia tel/ after sanction to the forma-
tion of the Ins itute Messrs Rangaswamy Iyengar Superi-
inten'in. Engineer and M G Ramachandra Rao Superintendent
Indu trial School who were entrusted with the work proceeded to
Bombay and purchased most of the machiner and tools and models
for the /ork-shop Indu tries and rts Sections and Typewriters
required for the Commercial/School Section

A sum of Rs 31 000/- w s sanctioned l. the Goverment for
the equipment of the differ nt Sections of the Institute as de-
tailed below

Industry and Crafts Sections	Rs 10 000
Work-shop Section	Rs 15 000
Commercial School Section	Rs 6 000
	Rs 31 000

As no provision had been made for the equipment of the Arts Section it was resolved by the Managing Committee of the Institute at their first meeting to reappropriate the allotment of Rs 6 000/- for the Commercial Section by issuing Rs 2 000 for the Arts Section A sum of Rs 21 927/- was spent up to the end of the half year under report in the equipment leaving a balance of Rs 9073/- The accompanying statement gives in detail the amount spent for equipment of the different Sections

The machinery tools furniture etc were got ready by the time the Industrial School removed to the new building The fitting up of the machinery shafting and engine for the work-shop took some time and it was not till the very close of the half year under report that the machinery portion of the workshop was ready to commence working

As laid down in the Government Proceedings the Institute consists of the following Sections -

1 Engineering Section
2 Industries and Crafts Section
3 Arts Section
4 Commercial Section
5 Workshop section

The Engineering Section was under the management of Mr B C Srinivasiengar the Head Master and the remaining Sections under Mr M G Ramachandra Rao All these Sections are being managed satisfactorily and the reports on these Sections drawn up by the Superintendents and enclosed herein give in detail the work and the progress achieved in the respective branches

The Committee appointed by the Government for the management of the Institute held their first meeting on 19th May 1913 and two subsequent meetings on 2nd August and 8th October 1913

A Sub-Committee was appointed for considering the revision of the Engineering School Course and the report of that bod was discussed by the Committee A final report on the subject will be submitted shortl

The Institute has just been started and ever endeavour is being made to manage it efficiently and make it fulfil the purpose for which it is intended

(Sd) S Srinivasa Aiyar
Secretary
for the Committee

C Krishnaswamy
Deputy Inspector General
for Inspector General
(Absent from Station)

TR

REPORT of the working of the Engineering Section of the Chamarajendra Technical Institute for the half year ending in December 1913

The School was opened on the 15th of June with 23 students in the Senior Sub-Overseer Class There were 90 applicants for admission to the Junior Sub-Overseer Class An admission examination was held on the 16th and 17th June in English and Mathematics by the Head Master and Messrs H R Krishna Murthy Rao B A and A Krishna Rao B A of the Maharaja's College Out of the successful candidates 35 were selected for the Junior Sub-Overseer Class Except about half a dozen students all the rest of the admissions were from those that passed the school final or the matriculation examination The others had completed their 6th form course and had taken not less than thirty five per cent of marks in English and Mathematics

Rule 2 in the Prospectus says that only 45 students ~~xx~~ should be admitted from the two classes This was modified a resolution of the previous Managing Committee to 35 (i e) 15 to the Senior Class and 20 to the Junior class Owing to the large rush of applicants during the last two years I had to admit 47 students with the personal approval of the Inspector General of Education during 1912-13 and 58 students in 1913-14 This means of course a larger provision for furniture apparatus contingencies etc for which the annual grant of Rs 100/- for furniture and Rs 300/- for instruments and models is not sufficient Special sanctions have therefore to be made to have a proper equipment of these materials to suit the increased number of boys

Students from almost all the Districts of the Province and from certain Districts of the Madras Presidency such as

Salem

Salem Coimbatore Trichinopoly and Malabar have joined the School

new Sheikdars Class was opened in July with 35 students as per orders of the Inspector General of Education This class is not yet fully equipped Two teachers were sanctioned for it by Government in 1913 but as yet no sanction has been accorded to the necessary furniture such as Drawing tables etc Provision has been made for some money for this in the next year's Budget

The School which was held in a rented building in Nazarbad was removed to the Institute Buildings in August

Seventeen boys appeared and passed the Sub-Overseers tests held in April 1913 No boy wished to leave the school at the end of their first year's course during the last three years and the Minor Subordinate class has therefore been practically non-existant as such The first ten boys among the successful candidates were appointed as Sub-Overseers at Kannambody by the Chief Engineer but only about five took up the work The others went outside the Province having got better chances of employment in the Madras and Bombay Presidencies Four of them have been employed in the Madras Presidency on Rs 40/- per mensem Three in Bombay Presidency on pay ranging from Rs 50/- to 60/- per mensem No student remains unemployed The work of these students has been well appreciated by their employers wherever they have gone

During 1912-13 five boys passed the Advanced Grade Survey Examinations from the Engineering School the number of passes for all the rest of the Presidency being only two

This was also the first year when the student appeared for and passed the Intermediate Grade in Applied Mechanics During 1913-14 twenty students have sent their applications for the Advanced Survey Examinations

The old Students [illegible] building is quite insufficient and insanitary. It is besides very far from the Institute. A new and commodious building has been selected near to the Institute and to it will be shifted in March.

The teachers have all worked satisfactorily. The first assistant in Mathematics has also passed in addition to the other Examinations he had already passed the highest qualification in Machine Construction also in the Madras Government Technical Examinations this year.

From time to time since the School was formed, changes have been made in the Prospectus which it is necessary to revise and reprint. A sub Committee was appointed to revise further the course and establishment of the school and their report has been pending disposal by the General Committee.

(Sd) B C Srinivasa Iyengar
Head Master
Govt Engineering School
Mysore

Copy

C Venkatarama Iyer
Deputy Inspector General
for Inspector General
(Absent from Station)

A BRIEF REPORT on the working of the Industries and Crafts Section of the Chamarajendra Technical Institute for the half year ending 31st December 1913

This Section was constituted out of the old Industrial School on the lines laid down in G O No 8834-40/Edn 402-09-24 of the 1st Jan 1913 only in the middle of the half year under report The shifting of the school from the old building to the new Chamarajendra Technical Institute building occupied till the end of August 1913 and the regular work in the training Section had therefore to be commenced from 8th September 1913

INDUSTRIES TAUGHT

Classes for Cabinet Making Smithy and Fitters work Rattan work were continued as they were Inlay work and Engraving work were started in the middle of November 1913 These Sections have been equipped with up-to-date tools and necessary furniture The following new machines were brought and erected -

1 Power Drilling Machine
1 Metal Turning Lathe

and in addition the old machines noted below which were already in use were also fitted in the training Section

1 Screw cutting lathe
1 band saw

To work these a $5\frac{1}{2}$ I P motor was installed This also works a blower for feeding the forges of the Smithy class with the necessary draught Training in wood-carving has not been organized as yet

S t r e n g t h

The number of students that are trained in different

industries is 131 and they are as follows

1	Cabinet making	65
2	Blacksmithy & Fitters	26
3	Rattan	30
4	Inlay work	4
5	Engraving	6
	Total	131

CHANGES IN THE HOURS OF ATTENDANCE

The hours of attendance are from 8 to 12 A M and from 2 to 5 P M instead of 7-30 A M to 11 A M and 2 to 5 P M as hitherto adopted Out of the 7 working hours two are devoted for drawing and general education (One hour for drawing and one hour for general education)

METHODS OF INSTRUCTION AND PROGRESS

It is so arranged that students of the Training Sections are sent in batches every hour to the drawing as well as to the general education classes with a view to keep up every class working in all the school hours and it is too early to form an opinion about the method

The period of training in each of the Industries is one of three years a graduated course has been introduced for different years and particular attention is paid to the neatness and the accuracy of the work The students have been given considerable practical training in the recent erections of the machinery and the workshop as well as in the Training Section

From Machinery and Fitters classes two students are sent to workshop every week for being trained in driving oil engine Similarly two students are sent from the Cabinet Making Section to learn polishing the furniture

PUBLIC EXAMINATION

15 students were sent up for the Madras Technical Examinations in different industries and 14 were successful It will be seen from the table given below that all the candidates that passed have passed very creditably taking very high places among the successful candidates in the Presidency

Subject	Grade	No Appeared	No Passed	Merit
Cabinet Making	Advanced	3	3	1 1st class
do	Do	2	2	2nd "
do	Elementary	8	8	1 1st class
Blacksmithy	Do	2	1	2nd class

ART SECTION

There are 29 students in this Section and they have been classified according to the sanctioned scheme One has taken up the portrait painting 4 decorative art etc 6 modelling and the rest 17 are in pre-elementary classes Of these 12 are scholarship holders and five are half time students who are paying the usual fees and learning the Art

PUBLIC EXAMINATION

Very satisfactory progress has been shown as usual in this section although the work has interrupted due to the shifting of the school The table appended below shows the details of results achieved in the Madras Technical Examinations -

Subject	Grade	o Appeared	No Passed	Merit
F H O Drawing	Adv	1	1	2nd class
Do	Int	4	2	do
Do	Ele	2	2	do
Geometrical Drawing	Adv	1	-	
Do	Int	3	3	1 1st class 2 2nd class
Painting	Int	1	1	2nd class
Do	Ele	3	3	do
Decorative Design	Int	3	3	do
Do	Ele	1	-	--

It is highly gratifying to note that a student has taken the Art Diploma for the first time and that two have secured group certificates in Drawing

M O D E L L I N G

A competent modelling instructor was not secured in the half year under report and the class was managed by the first Drawing Master (One has been since appointed)

COMMERCIAL SECTION

A class for imparting instruction in Type-writing was started with 70 students on the 1st December 1913 and the Typist of the Institute is managing the class very satisfactorily From the subjoined table it will be seen how admissions have been made to the class -

Students attending from the Maharaja's College	14
Students attending from the Larimallappa's High School	14
Officials attending	13
Private students	29
Total	70

A monthly fee of annas eight and an admission fee

of annas eight is charged to every student in this Section There are seven batches containing 10 students in each batch and each pupil is allowed to work for 45 minutes on the machine each day Classes are being held from 8 to 10-15 in the mornings and from 3-45 to 4-30 and again from 6 to 8-15 P M A shorthand class will be opened very shortly and the remaining subjects will be taken up only in the beginning of the next official year

W O R K S H O P

The receipt of the oil engine and other machinery of this Section and their erection with the necessary shifting occupied till the end of December 1913 and regular work in the machinery portion did not commence before the close of the half year under report A few petty orders were however received and executed in November and December

The machines in the workshop are being driven by a Hornby Oil Engine of 12 H P

(1 One big screw cutting lathe
(2 One medium size and
(3 One small turning lathe
(4 A saw bench
(5 2 drilling machines have been purchased and erected
(6 One punching machine
(7 Old drilling machine
(8 One band saw
(9 Small circular saw which were in stock

have also been fitted up in the workshop There is a blower feeding the forges in the Smithy Section with the necessary draught Arrangements for casting on a small scale have been made The following temporary establishment has been sanctioned -

P T O

GRS 28]

11/5

Edn File No 342 13
Serial No 3

Diary No of letter replied to 5492 and 5666

Proceedings of the Government of His Highness the Maharaja of Mysore

GENERAL AND REVENUE SECRETARIAT
(Edn)

READ—

the 191

Letters Nos 12178-9 and 6324

12511 / 652 dated the 14th and 28th March 1914 respectively, from the Inspector Genl of Edn in Mysore,

Date of issue 1.5.14

Signed by Mr A V Ramanathan

reference to para 7 of G O No 883-140 Edn 462 09-24 dated 1.8.1913, copies of reports

ORDER THEREON—No

of the Managing Committees of the Mechanical Engineering School Bangalore and the Chamarajendra Technical Institute Mysore for the half year ending 31.12.1913

over

SUBJECT

GPB— 0 000—1 12-12

Copy 8/1/13 S

Order Issued

1140 dt 28.3.62-B— 9/14 5.14

Recorded

Secretary to Govt
Edn Deptt

To

The Dy Dir of Edn in all Dists